

IN THE CLAIMS

1. (currently amended) A method for *in vivo* expression of an immunogen comprising:

administering ~~an inactivated~~ a non-mammalian host cell to a mammal, wherein said host cell comprises a polynucleotide encoding an immunogen, wherein the non-mammalian host cell is unable to use its own machinery to express the encoded immunogen, wherein the polynucleotide comprises a promoter functional in a eukaryotic cell, and wherein the immunogen is expressed in vivo by the mammalian cells cells of the mammal.
2. (original) The method of claim 1 wherein the host cell is inactivated by heat treatment.
3. (original) The method of claim 1 wherein the host cell is inactivated by ultra-violet light exposure.
4. (original) The method of claim 1 wherein the host cell is inactivated by hydrogen peroxide treatment.
5. (original) The method of claim 1 wherein a plasmid comprises the polynucleotide encoding the immunogen.
6. (original) The method of claim 1 wherein the polynucleotide encoding the immunogen is incorporated into the host cell genome.
7. (original) The method of claim 1 wherein the expressed immunogen generates an immune response in the mammal.
8. (currently amended) A method of generating an immune response in a mammal comprising:

administering ~~an inactivated~~ a non-mammalian host cell to said mammal, wherein said inactivated host cell comprises a polynucleotide encoding an immunogen, wherein the

non-mammalian host cell is unable to use its own machinery to express the encoded immunogen, wherein the polynucleotide comprises a promoter functional in a eukaryotic cell, and wherein the immunogen is expressed *in vivo* by cells of the mammal, thereby generating an immune response in the mammal against the immunogen.

9. (original) The method of claim 8 wherein the host cell is inactivated by heat treatment.

10. (original) The method of claim 8 wherein the host cell is inactivated by ultraviolet light exposure.

11. (original) The method of claim 8 wherein the host cell is inactivated by hydrogen peroxide treatment.

12. (original) The method of claim 8 wherein a plasmid comprises the polynucleotide encoding the immunogen.

13. (original) The method of claim 8 wherein the polynucleotide encoding the immunogen is incorporated into the host cell genome.

14-22. (canceled)

23. (new) The method of claim 1 wherein the non-mammalian host cell is selected from the group consisting of bacteria, yeast, insect cells, and mycobacteria.

24. (new) The method of claim 23 wherein the non-mammalian host cell is a bacterial cell.

25. (new) The method of claim 24 wherein the bacterial cell is selected from the group consisting of *E. coli*, *Shigella spp*, *Bordetella spp*, *Salmonella spp*, *Bacillus spp*, *Streptococcus spp*, and *Mycobacteria spp*.

26. (new) The method of claim 25 wherein the bacteria are *E. coli*.

27. (new) The method of claim 25 wherein the bacteria are *Shigella flexneri*.

28. (new) The method of claim 25 wherein the bacteria are *Mycobacterium bovis*.
29. (new) The method of claim 25 wherein the bacteria are *Salmonella typhi* TY21a.
30. (new) The method of claim 23 wherein the non-mammalian host cell is a yeast cell.
31. (new) The method of claim 30 wherein the yeast cell is selected from *Saccharomyces spp* and *Streptomyces spp*.
32. (new) The method of claim 23 wherein the non-mammalian host cell is an insect cell.
33. (new) The method of claim 32 wherein the insect cell is selected from the group consisting of *Aedes aegypti*, *Autographica California*, *Bombyx mori*, *Drosophila melanogaster*, *Spodoptera frugiperda*, and *Trichoplusia ni*.
34. (new) The method of claim 8 wherein the non-mammalian host cell is selected from the group consisting of bacteria, yeast, insect, and mycobacteria.
35. (new) The method of claim 34 wherein the non-mammalian host cell is a bacterial host cell.
36. (new) The method of claim 35 wherein the bacterial host cell is selected from the group consisting of *E. coli*, *Shigella spp*, *Bordetella spp*, *Salmonella spp*, *Bacillus spp*, *Streptococcus spp*, and *Mycobacterium spp*.
37. (new) The method of claim 36 wherein the bacteria are *E. coli*.
38. (new) The method of claim 36 wherein the bacteria are *Shigella flexneri*.
39. (new) The method of claim 36 wherein the bacteria are *Mycobacterium bovis*.
40. (new) The method of claim 36 wherein the bacteria are *Salmonella typhi* TY21a.
41. (new) The method of claim 34 wherein the non-mammalian host cell is a yeast cell.

42. (new) The method of claim 41 wherein the yeast host cell is selected from *Saccharomyces spp* and *Streptomyces spp*.

43. (new) The method of claim 34 wherein the non-mammalian host cell is an insect cell.

44. (new) The method of claim 43 wherein the insect cell is selected from the group consisting of *Aedes aegypti*, *Autographica californica*, *Bombyx mori*, *Drosophila melanogaster*, *Spodoptera frugiperda*, and *Trichoplusia ni*.